

REMARKS

The specification has been amended to add section headings and to make an editorial change to page 6.

The Official Action objects to the drawings, specification and claim 1 for not properly describing the cutout. However, the drawings, specification and claim 1 are correct. The cutout 1 is on one side of a plane, where that plane is defined by an intersection of two lines - as all planes are; namely, a line passing through the geometric axis of the light source (e.g., perpendicular to paper at S in Figure 1) and a line parallel to the optical axis Y-Y. The statement "and parallel to the optical axis" refers to one of the lines forming the plane, not to the cutout. As shown in Figure 1, the plane of the cutout 1 may be oblique (see also, page 2, lines 28-33 and page 5, lines 9-11). Reconsideration and withdrawal of the objections to the drawings, specification and claim 1 are respectfully requested.

Please note that the reference to "the plane" in claim 1, line 8 is believed to be proper inasmuch as only one plane is defined by the intersection of the two lines given in claim 1.

The claims define a headlight for a motor vehicle that includes a reflector and a light source running transversely to the optical axis of the reflector and placed near the focal point of the reflector. The transverse light source is placed near the internal focal point of an ellipsoidal reflector, the wall of the ellipsoidal reflector has a cutout situated on one side of the

plane passing through the geometric axis of the light source and parallel to the optical axis of the ellipsoidal reflector, a lens with an optical axis parallel to or coincident with that of the ellipsoidal reflector is placed in front of this reflector, the focal point of the lens being close to the external focal point of the ellipsoidal reflector, and a verticalized reflector is arranged on the opposite side of the cutout to the most-part of the ellipsoidal reflector. The verticalized reflector is designed to produce a long-range beam which is not intercepted by the lens, the ellipsoidal reflector giving a wide beam of shorter range. In claim 1, the verticalized reflector has striations delimiting at least one central facet and two lateral facets that are inclined toward one another. In new claim 21, the verticalized reflector is designed to give images of the light source centered on the optical axis at a distance of several tens of meters from the headlight. In new claim 22, the cutout corresponds substantially to a cutting-off of the lower half of the reflector along an oblique plane.

Claims 1-2, 6, and 16 were rejected as anticipated by KRETSCHMER et al. 4,772,987. Claim 1 has been amended to include the limitations of claim 3 and reconsideration and withdrawal of the rejection are respectfully requested.

Claims 3-5, 7-15, and 17-20 were rejected as unpatentable over KRETSCHMER et al. in view of TAKADA 6,435,703.

Reconsideration and withdrawal of the rejection are respectfully requested.

KRETSCHMER et al. describes a headlight for antidazzle and anti-fog lamps for motor vehicles.

In contrast to the claims herein, the light source 15 (Figure 1) is not transverse to the optical axis, but rather is parallel to optical axis.

The reflector 12, which is of the parabolic type, is designed to give a wide beam that lights the road sides (e.g., column 2, lines 11-12) and not to give a long range beam, as in the case of the present invention. Prisms 23 may be provided to widen the additional beam coming from the reflector 12. The verticalized reflector herein gives a long-range beam that is not intercepted by the lens, while the ellipsoid reflector, combined with the transverse light source, gives a wide beam of shorter range.

KRETSCHMER et al. uses a reflector 10 with two portions 11 and 12, but does not disclose an ellipsoid reflector with a cutout positioned as in the claims. The reference appears to concentrate on control of the beam orientation in a vertical plane. Further, the reflector 11 that the Official Action indicates corresponds to the ellipsoid reflector of the claims, has vertical and horizontal meridian portions that are curves of a higher order, particularly ellipses and parabolas (column 2, lines 42-44), while the reflector herein is defined as an

ellipsoid reflector. Thus, the geometrical definitions of the reflector in the reference and the claims are different.

Further, the reflector 12 in the reference that the Official Action indicates corresponds to the verticalized reflector, is not designed to produce a long-range beam as is claimed herein.

The reference also does not disclose that the verticalized reflector has striations delimiting at least one central facet and two lateral facets that are inclined toward one another, as in claim 1, that the verticalized reflector is designed to give images of the light source centered on the optical axis at a distance of several tens of meters from the headlight, as in claim 21, or that the cutout corresponds substantially to a cutting-off of the lower half of the reflector along an oblique plane, as in claim 22.

TAKADA has been carefully considered and does not make up for the shortcomings of KRETSCHMER et al. noted above, and thus the proposed combination does not disclose all of the limitations claimed herein. Accordingly, the claims would not be obvious to one of skill in the art from the two references.

TAKADA also does not disclose a light source that is transverse to the optical axis of the reflector; the light source therein is parallel to the axis (e.g., Figures 2, 4).

According to the Official Action, an ellipsoid reflector (Figure 2, 24) is below the horizontal plane passing

through the axis Ax, while the verticalized reflector (34A) is above this plane. However, the reflector in TAKADA running in a vertical direction includes a part 34B below the plane passing through the axis Ax, while the ellipsoid reflector includes a part 24a above this plane. The additional beam P1 (Figure 5) produced by the upper central facet 34s1 is above the cut-off line to lighten high traffic panels without blazing an oncoming driver. Thus, TAKADA does not disclose a verticalized reflector that is designed to produce a long-range beam which is not intercepted by the lens, and an ellipsoidal reflector giving a wide beam of shorter range, as claimed herein.

Since neither reference discloses or suggests a transverse light source, the combination of these references would not include a transverse light source and the claims would not be obvious to one of skill in the art.

Further, it is not believed that one of skill in the art would make the proposed combination. TAKADA has the objective to provide a projector-type lamp having an improved external appearance (column 1, lines 51-55), which has no bearing on the lamp in KRETSCHMER et al., and one of skill in the art would not make this combination.

Even if one did combine them in spite of these differences, he would replace the portion 12 of KRETSCHMER et al. with the reflector 34B of TAKADA, which will give the patterns P4 and P5 (column 6, lines 28-34 and Figure 5 of TAKADA). The

resulting lamp would not provide a long-range beam complemented by a wide beam of shorter range, as in the claims herein.

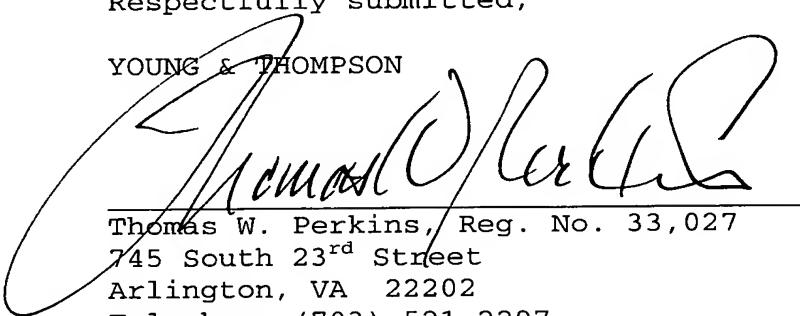
New claim 23 is also allowable because the references do not disclose the two reflectors separated by a gap (e.g., Figure 1 of the present application).

In view of the present amendment and the foregoing remarks, it is believed that the present application has been placed in condition for allowance. Reconsideration and allowance are respectfully requested.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

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